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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Atsushi Ishikawa

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

MAIL DATE

DELIVERY MODE

10/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,949	Applicant(s) ISHIKAWA ET AL.	
	Examiner DONGHAI D. NGUYEN	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 8-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 16-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on June 19, 2008 has been considered and made of record. Claims 1-19 are pending. Claims 8-15 are withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5-7 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by US Patent 6,063,647 to Chen et al or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chen et al in view of Applicants Admitted Prior Art (AAPA)

Regarding claim 1 Chen et al disclose a jig (22) comprising: a plate (22) having a weak-adherence adhesive pattern (36) on a surface of the plate (22, see Fig. 1c); and a printed circuit board (21) having a conductive portion (25) and a non-conductive portion on a surface of the printed circuit board (21, see Fig. 1a), or a conductive material laminated plate for manufacturing said printed circuit board, said printed circuit board (21) or said conductive material laminated plate being placed and held on the surface of said plate (22), wherein said weak-adherence adhesive pattern (36) is formed at a position corresponding to said non-conductive portion (see Figs. 1d and 5e).

Regarding claim 2, Chen et al disclose a jig (22) for holding and conveyance comprising: a plate (22) having a weak-adherence adhesive layer (36) on a surface of the plate (22); and a printed circuit board (21) has a conductive portion (25) and a non-conductive portion on a surface of the printed circuit board (see Fig. 1a), or a conductive material laminated plate for manufacturing said printed circuit board, said printed circuit board (21) or said conductive material laminated plate being placed and held on the surface of said plate (22, see Fig. 1d), wherein a weak-adherence adhesive pattern (36) subjected to surface roughening (see Fig. 1b or 4b-c) is formed on a surface of said weak-adherence adhesive layer at a position corresponding to said conductive portion (see Figs. 1d and 5e).

Regarding claims 6 and 7, as best understood, Chen et al disclose methods of conveying a printed circuit board, electroconductive material laminated plate, (21) having a conductive portion (25) and a non-conductive portion on a surface of the plate (see Fig. 1a) while holding said printed circuit board on a jig (22) for holding and conveyance, said jig (22) having a weak-adherence adhesive pattern (36) provided on a surface of the printed circuit board, the method comprising the step of: holding said printed circuit board, said electroconductive material laminated plate (21), on the surface of said jig (22) for holding and conveyance, in a manner such that said non-conductive portion is placed by being restricted to a surface of said weak-adherence adhesive pattern (see Figs. 1d and 5e).

Chen et al inherently disclose the adhesive pattern is weak-adherence, because the adhesive can be easily removed (see Fig. 1b or 4b-c). If Applicants argue that the adhesive of Chen et al is not weak-adherence adhesive pattern. AAPA disclose the use of weak-adherence adhesive pattern for holding the substrate to the jig (see page 2, last paragraph). Therefore, it

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would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Chen et al by utilized the weak-adherence adhesive patent as taught by AAPA for holding the substrate to the jig.

Regarding claims 3, 5 and 16, Chen et al disclose the adhesive pattern has a plurality of thickness regions differing in thickness from the surface of said plate (see Fig. 5d) and a non-adhesive pattern is formed at a position corresponding to said conductive portion on the surface of said weak-adherence adhesive layer (see Fig. 1d).

4. Claims 4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al or Chen et al/AAPA as applied above further in view of US Patent 5,352,314 to Coplan.

Chen et al or Chen/AAPA do not disclose a plurality of adhesive strength regions differing in adhesive strength. Coplan teaches the adhesive strength between layers can be controlled (different) for properly holding the layers (see Col. 4, lines 53-64). therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Chen et al by utilized the weak-adherence adhesive patent having plurality of adhesive strength regions differing in adhesive strength as taught by Coplan for properly holding the substrate and jig together.

Response to Arguments

5. Applicant's arguments filed on June 19, 2008 have been fully considered but they are not persuasive.

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Applicants argue that “Chen et al. do not, however, disclose, teach or suggest a holding and conveyance jig for holding a printed circuit board or a conductive material laminated plate for manufacturing a printed circuit board as defined by the present claims” (see “Remarks” page 13, 2nd paragraph). The Examiner disagrees because Chen et al disclose all the structures limitations of the jig. That is the jig comprises a plate (22) having a weak-adhesive pattern (36) on a surface of the plate (see Fig. 1c) and the printed circuit board (21) having conductive portion (25) and a non-conductive portion (see Fig. 1a). Note that Applicants have not claimed "a holding" in the present claims.

Applicants argue that the combination of Chen et al. and AAPA does not disclose, teach or suggest: (i) a weak-adherence adhesive pattern formed on a surface of a plate of a jig for holding and conveyance, and at a position corresponding to a non-conductive portion of the relevant printed circuit board, and/or (ii) the weak-adherence pattern subjected to surface roughening formed on a surface of the weak-adherence adhesive layer at a position corresponding to a conductive portion of the relevant printed circuit board” (see “Remarks” last paragraph of page 14 to first paragraph of page 15). The Examiner disagrees because both Chen et al. and AAPA disclose a weak-adherence adhesive pattern (36 of Chen or page 2, last paragraph of AAPA) formed on a surface of a plate (22 or jig) at a position corresponding to a non-conductive portion of the relevant printed circuit board (see Fig. 1d of Chen et al.) and/or the weak-adherence pattern (36) subjected to surface roughening formed on a surface of the weak-adherence adhesive layer (see Fig. 1b) at a position corresponding to a conductive portion (25) of the relevant printed circuit board (23, see Fig. 1d).

In response to applicant's argument that "Chen et al and the present invention belong to different technical fields" (i.e. is nonanalogous art, see "Remarks" page 13, last two lines), it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the substrate (22) of Chen et al is for affixing/holding/attaching to the printed circuit board (23).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DONGHAI D. NGUYEN whose telephone number is (571)272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
October 1, 2008

/Donghai D. Nguyen/
Primary Examiner, Art Unit 3729